(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau







(43) International Publication Date 29 April 2004 (29.04.2004)

PCT

(10) International Publication Number WO 2004/036820 A3

(51) International Patent Classification⁷:

G06F 13/38

(21) International Application Number:

PCT/IB2003/004196

(22) International Filing Date:

19 September 2003 (19.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02079338.6

18 October 2002 (18.10.2002) EF

- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KLOSTERS, Franciscus, J. [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). HEUTS, Patrick, W., H. [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). BEVERLOO, Joris, R. [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). HEULE, Hendrik, B. [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

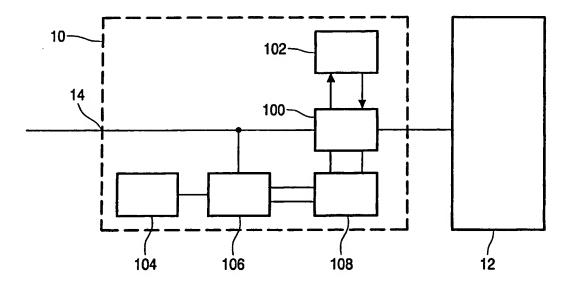
- (74) Agent: DUIJVESTIJN, Adrianus, J.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,

[Continued on next page]

(54) Title: DATA PROCESSING APPARATUS THAT PROCESSES INCOMING BITS



(57) Abstract: A data processing apparatus receives a communication signal that contains temporally successive bits. A programmable processor circuit executes a plurality of series of programmed instructions for operations such as parity checking, each at a time of reception of a respective one of the bits. The processor circuit suspends operation each time after executing a respective one of the series of instructions. A synchronization circuit triggers execution of respective ones of the series, each time at the time of reception of the respective one of the bits, and, except for a last one of the series, prior to reception of one or more later bits that contribute to the data word.



FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 16 September 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Inter I Application No PCT/1B 03/04196

			101/18 03/	704190	
A. CLASSII IPC 7	FICATION OF SUBJECT MATTER G06F13/38				
According to	o International Patent Classification (IPC) or to both national classif	fication and IPC			
	SEARCHED		············		
Minimum do IPC 7	ocumentation searched (classification system followed by classification sy	ation symbols)			
	tion searched other than minimum documentation to the extent tha				
	lata base consulted during the International search (name of data in ternal, WPI Data, INSPEC	base and, where practice	il, search terms used	,	
C. DOCUME	ENTS CONSIDERED TO BE RELEVANT	restent that such documents are included in the fields searched are of data base and, where practical, search terms used) ate, of the relevant passages Relevant to claim No. 10 JERRY ET AL) 1-3,9 19) 12, line 13 16, line 21 17, line 27 ARA KIYOSHI ET 19 11,9 12-8 13 14-8 15 D ET AL) 1-9			
Category °	Citation of document, with indication, where appropriate, of the	relevant passages		Relevant to claim No.	
X	US 6 163 586 A (HONGBIN HAO JERN 19 December 2000 (2000-12-19)	RY ET AL)		1-3,9	
А	column 1, line 59 - column 2, line 32 - column 6, line 50 - column 7, line 50 - column 7, line 35 - column 7, line 50 - column	4–8			
X	US 2002/087781 A1 (MATSUBARA KI) AL) 4 July 2002 (2002-07-04)	YOSHI ET		1,9	
А	column 1, paragraph 5 - paragraph 7 column 2, paragraph 36 - paragraph 46 abstract; figure 1			2-8	
Α	US 6 157 689 A (QUINN DAVID ET 5 December 2000 (2000-12-05) abstract; figure 3	AL)		1-9	
Furt	her documents are listed in the continuation of box C.	X Patent family	members are listed i	n annex.	
	ategories of cited documents:	*T* later document pu	blished after the Inte	emational filing date	
E' earlier of filing d		cited to understation invention "X" document of particion cannot be considerated.	nd the principle or the cular relevance; the c dered novel or cannot	eory underlying the claimed invention t be considered to	
which citation "O" docume	ent which may throw doubts on priority claim(s) or is clied to establish the publication date of another n or other special reason (as specified) ent referring to an oral disclosure, use, exhibition or	"Y" document of partic cannot be consid document is com	cular relevance; the c dered to involve an involve an involve an involve an involve an involve an income.	claimed invention ventive step when the one other such docu-	
"P" docume	means ent published prior to the international filing date but han the priority date claimed	in the art.		•	
Date of the	actual completion of the international search	Date of mailing of	the international sea	rch report	
1	2 July 2004	16/07/	2004		
Name and r	mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk	Authorized officer			
	Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Nguyen	Xuan Hiep,	C	

INTERNATIONAL SEARCH REPORT

Inte | Application No PCT/TB 03/04196

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6163586	A	19-12-2000	WO	0033525 A1	08-06-2000
US 2002087781	A1	04-07-2002	JP US US	7028772 A 6202123 B1 6006304 A	31-01-1995 13-03-2001 21-12-1999
US 6157689	A	05-12-2000	AU BR CN DE EE EP WO	2663999 A 9908831 A 1293852 T 69917624 D1 200000542 A 1070410 A2 9948244 A2	11-10-1999 21-11-2000 02-05-2001 01-07-2004 15-04-2002 24-01-2001 23-09-1999